US 20140357189A1

(19) **United States**

(12) **Patent Application Publication**

(10) **Pub. No.: US 2014/0357189 A1**

(43) **Pub. Date: Dec. 4, 2014**

Thuröe

(54) **METHODS OF RESPONDING TO AN ORIENTATION OR MOTION OF A PORTABLE ELECTRONIC DEVICE, AND RELATED DEVICES**

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(21) Appl. No.: **14/369,738**

(22) PCT Filed: **Feb. 27, 2012**

(86) PCT No.: **PCT/IB2012/000357**

§ 371 (c)(1),
(2), (4) Date: **Jun. 30, 2014**

Publication Classification

(51) **Int. Cl.**

H04M 1/725	(2006.01)
H04B 5/00	(2006.01)
H04W 4/00	(2006.01)

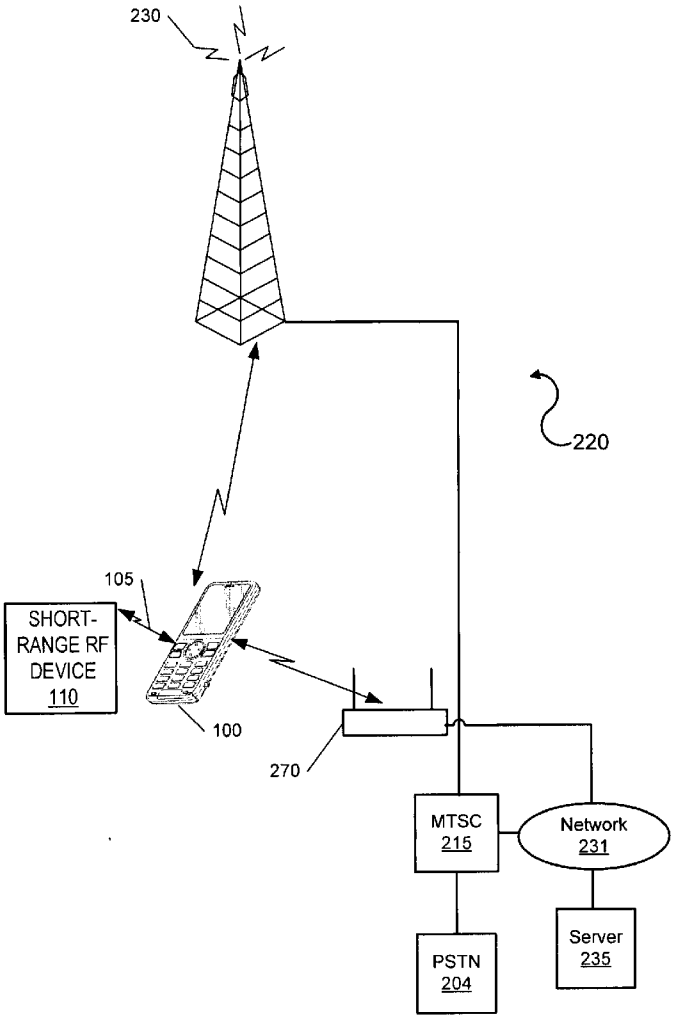
(52) **U.S. Cl.**

CPC ***H04M 1/72527*** (2013.01); ***H04W 4/008*** (2013.01); ***H04B 5/0031*** (2013.01)

USPC **455/41.1**; 455/41.2

(57) **ABSTRACT**

A method of responding to an orientation or motion of a portable electronic device may include receiving a plurality of commands at the portable electronic device from a proximately-located short-range radio frequency (RF) device through a direct point-to-point short-range RF communication link. The method may also include identifying the orientation or motion of the portable electronic device while the portable electronic device is proximately located to the short-range RF device. The method may further include selecting one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device.



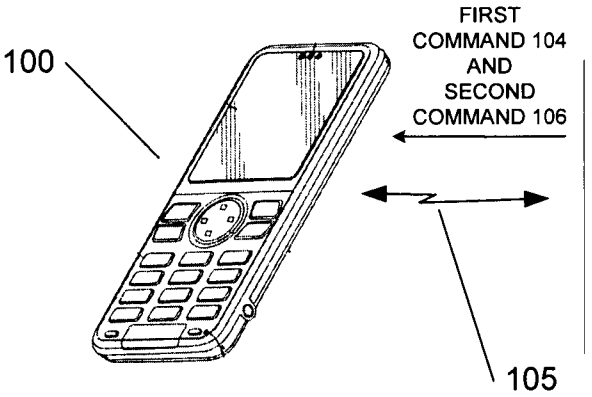


FIGURE 1

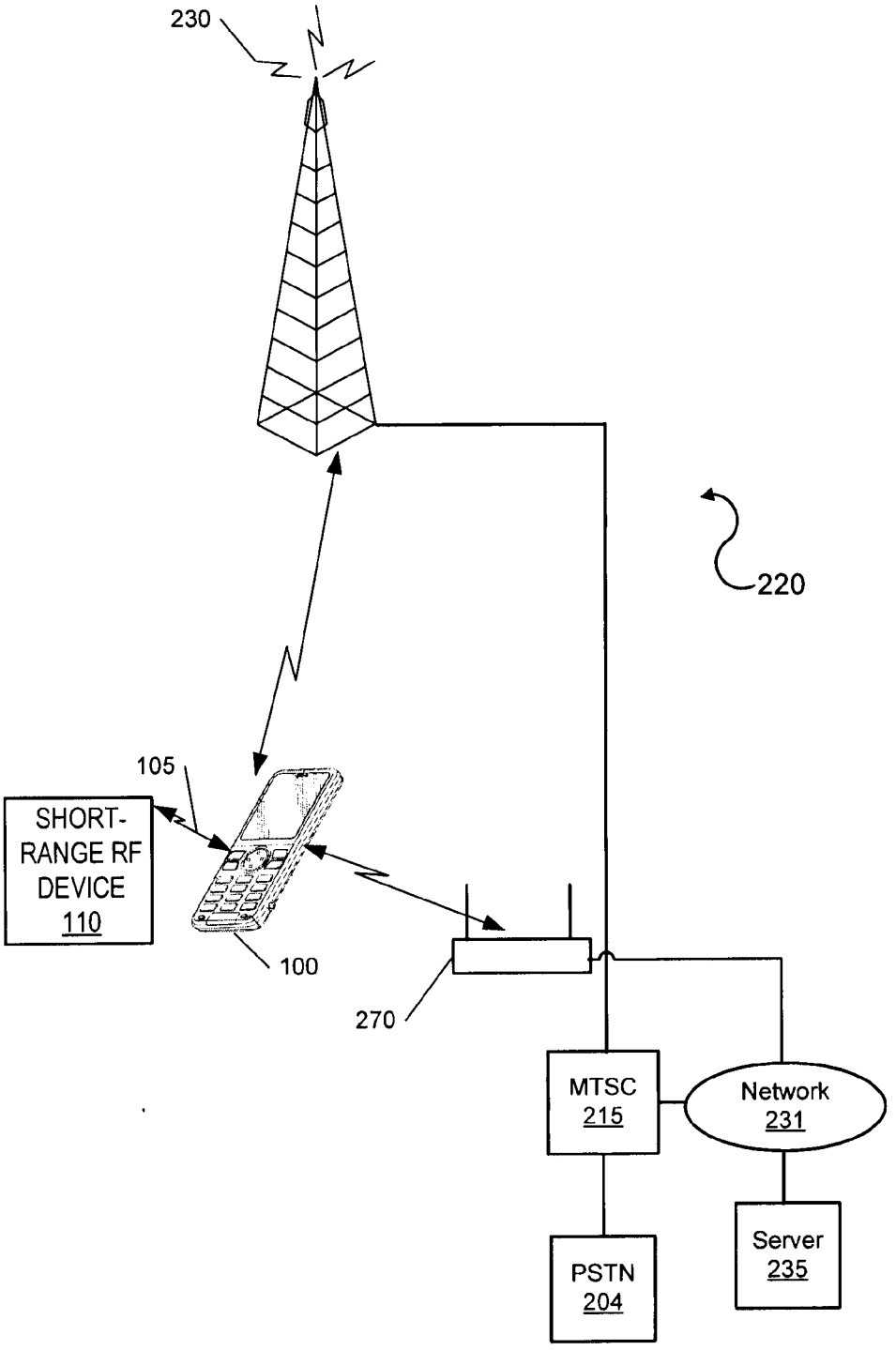

230
220
105
SHORT-RANGE RF DEVICE 110
100
270
MTSC 215
Network 231
PSTN 204
Server 235

FIGURE 2

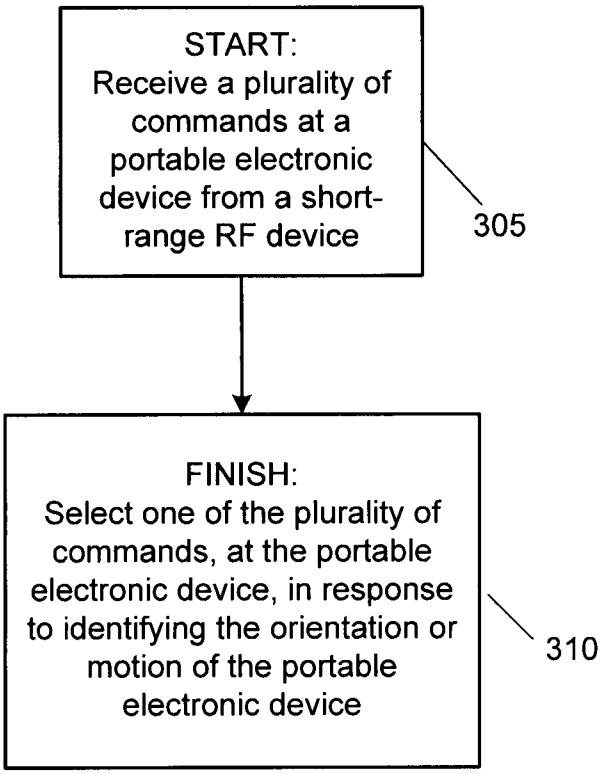

START:
Receive a plurality of commands at a portable electronic device from a short-range RF device
305
FINISH:
Select one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device
310

FIGURE 3

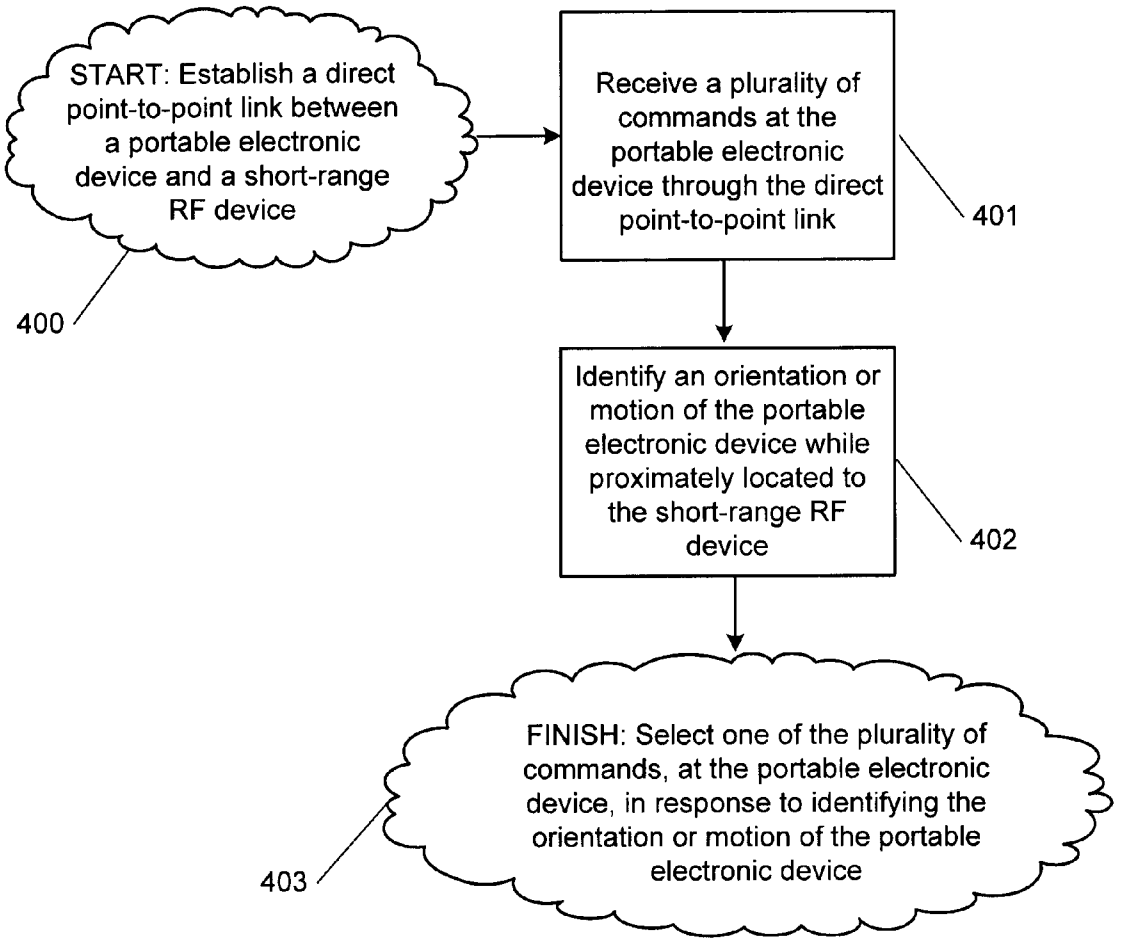

START: Establish a direct point-to-point link between a portable electronic device and a short-range RF device
400
Receive a plurality of commands at the portable electronic device through the direct point-to-point link
401
Identify an orientation or motion of the portable electronic device while proximately located to the short-range RF device
402
FINISH: Select one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device
403

FIGURE 4A

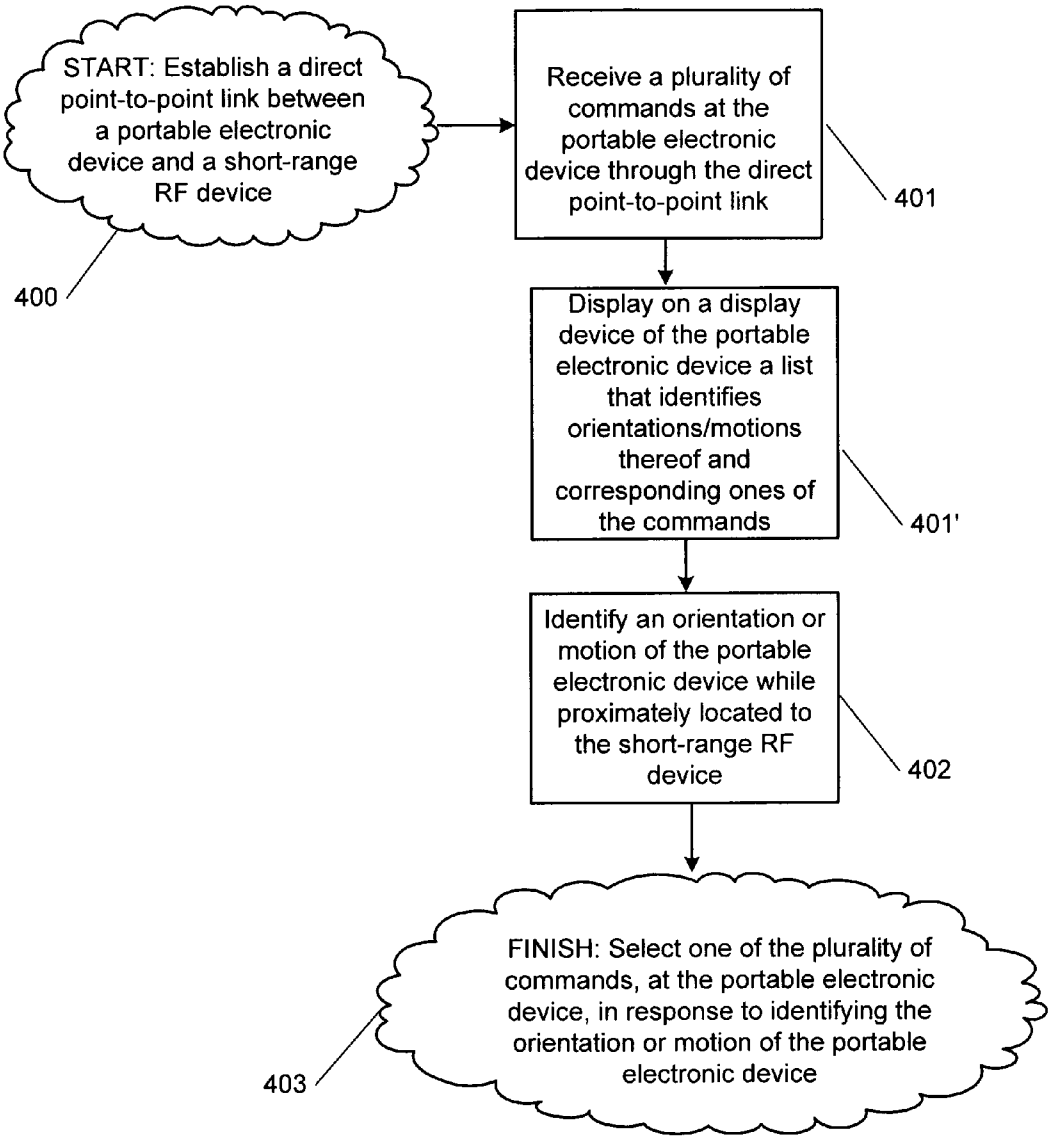

START: Establish a direct point-to-point link between a portable electronic device and a short-range RF device
400
Receive a plurality of commands at the portable electronic device through the direct point-to-point link
401
Display on a display device of the portable electronic device a list that identifies orientations/motions thereof and corresponding ones of the commands
401'
Identify an orientation or motion of the portable electronic device while proximately located to the short-range RF device
402
FINISH: Select one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device
403

FIGURE 4B

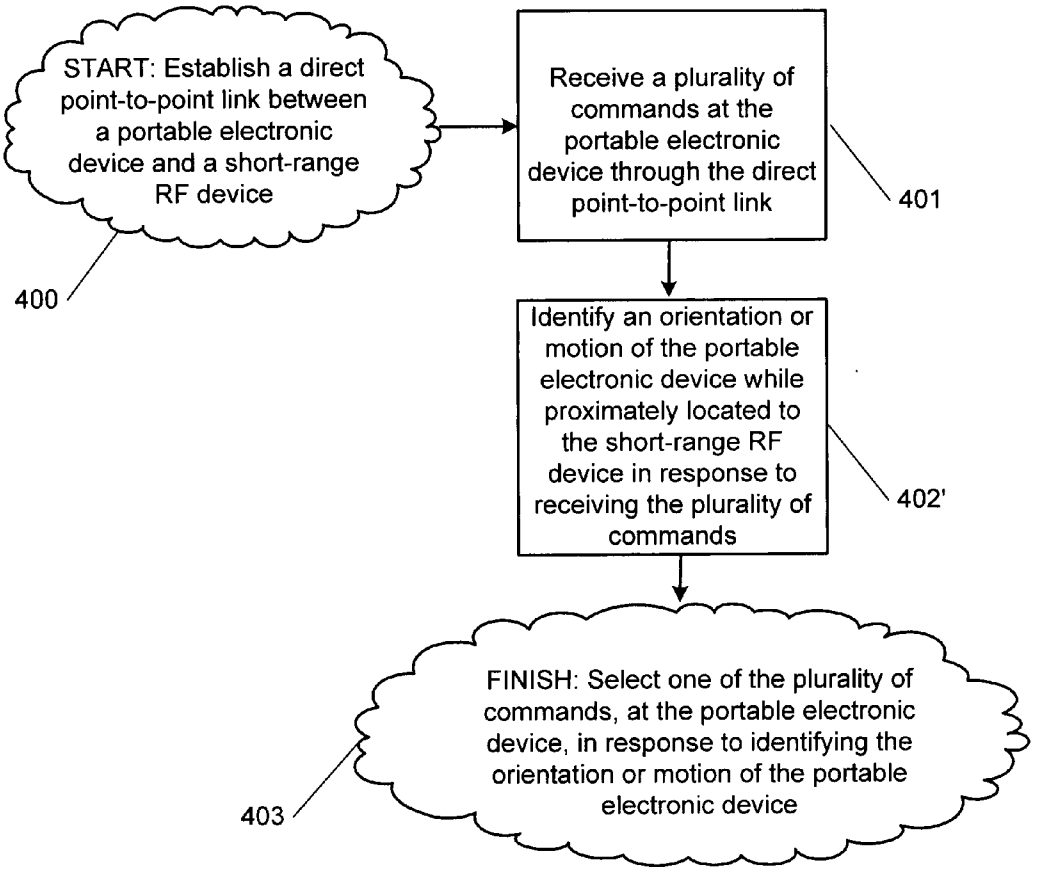

START: Establish a direct point-to-point link between a portable electronic device and a short-range RF device
400
Receive a plurality of commands at the portable electronic device through the direct point-to-point link
401
Identify an orientation or motion of the portable electronic device while proximately located to the short-range RF device in response to receiving the plurality of commands
402'
FINISH: Select one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device
403

FIGURE 4C

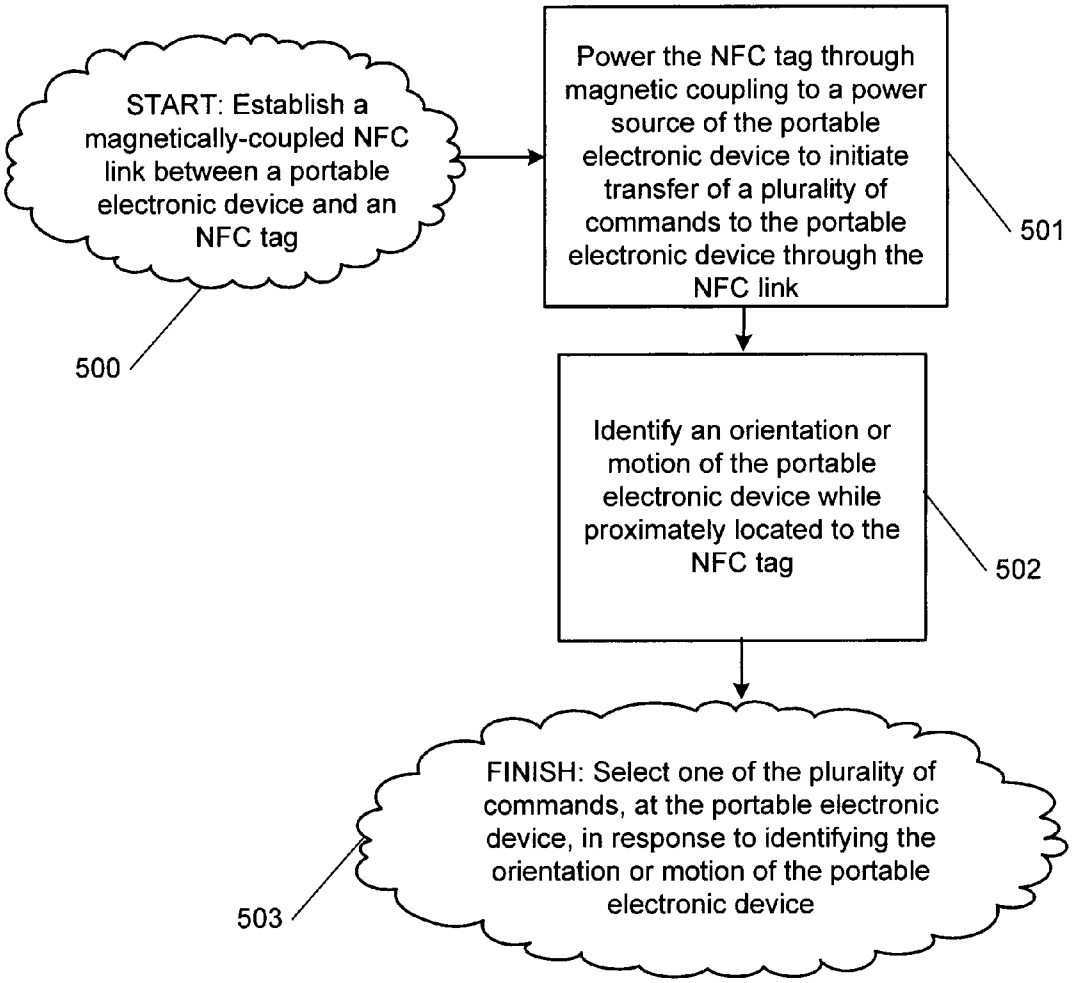

START: Establish a magnetically-coupled NFC link between a portable electronic device and an NFC tag
500
Power the NFC tag through magnetic coupling to a power source of the portable electronic device to initiate transfer of a plurality of commands to the portable electronic device through the NFC link
501
Identify an orientation or motion of the portable electronic device while proximately located to the NFC tag
502
FINISH: Select one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device
503

FIGURE 5

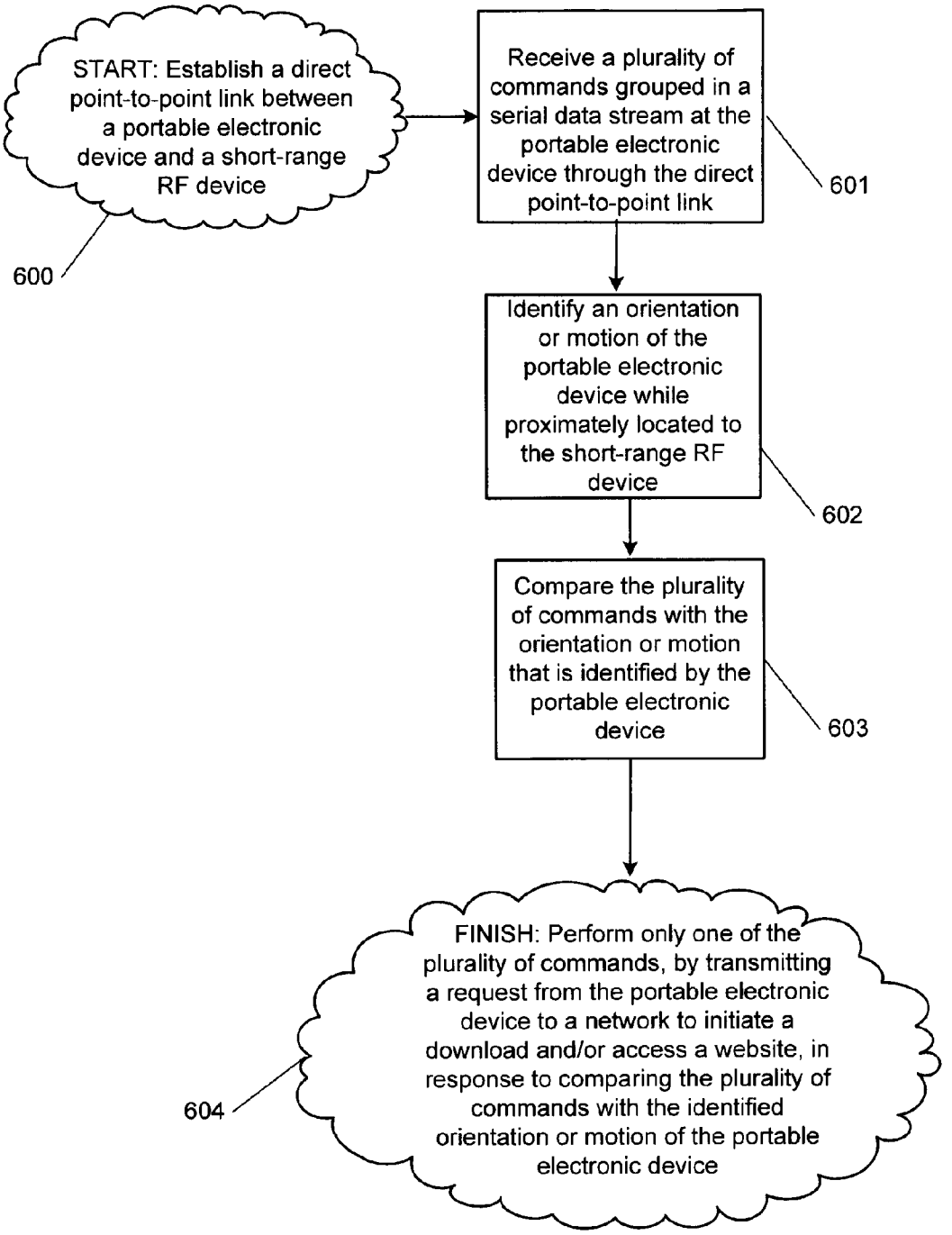

START: Establish a direct point-to-point link between a portable electronic device and a short-range RF device
600
Receive a plurality of commands grouped in a serial data stream at the portable electronic device through the direct point-to-point link
601
Identify an orientation or motion of the portable electronic device while proximately located to the short-range RF device
602
Compare the plurality of commands with the orientation or motion that is identified by the portable electronic device
603
FINISH: Perform only one of the plurality of commands, by transmitting a request from the portable electronic device to a network to initiate a download and/or access a website, in response to comparing the plurality of commands with the identified orientation or motion of the portable electronic device
604

FIGURE 6

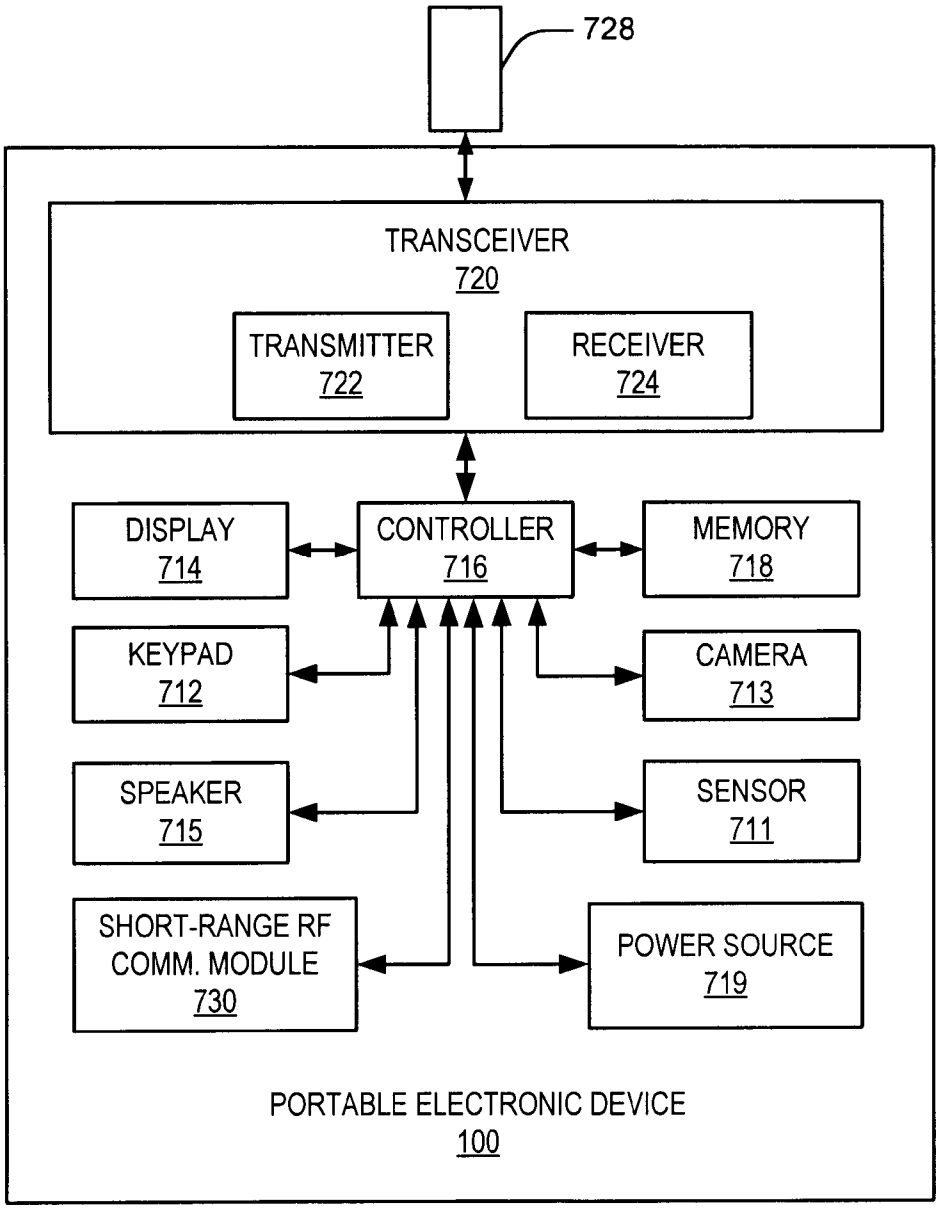

728
TRANSCEIVER
720
TRANSMITTER
722
RECEIVER
724
DISPLAY
714
CONTROLLER
716
MEMORY
718
KEYPAD
712
CAMERA
713
SPEAKER
715
SENSOR
711
SHORT-RANGE RF
COMM. MODULE
730
POWER SOURCE
719
PORTABLE ELECTRONIC DEVICE
100

FIGURE 7

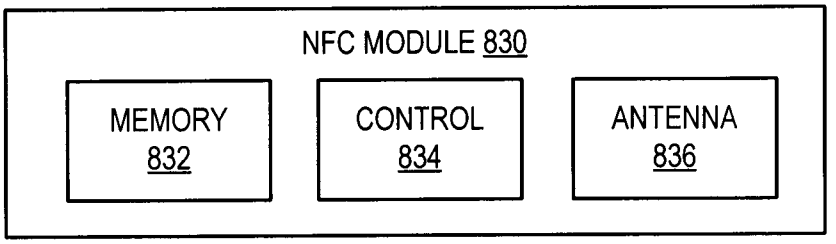


FIGURE 8

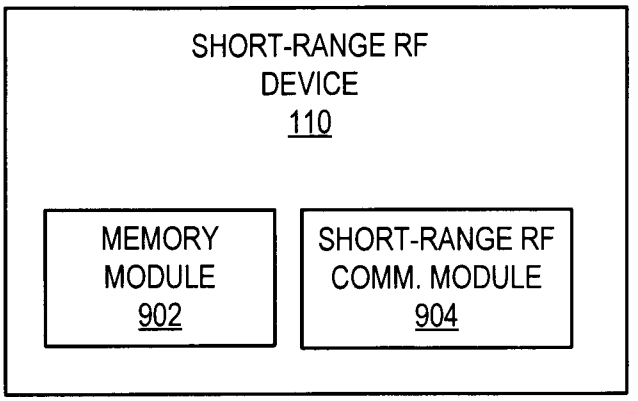


FIGURE 9A

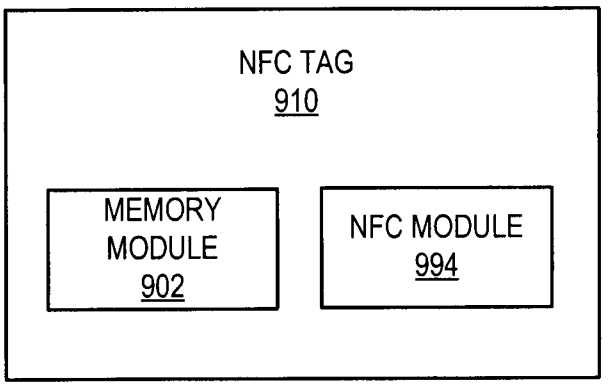


FIGURE 9B

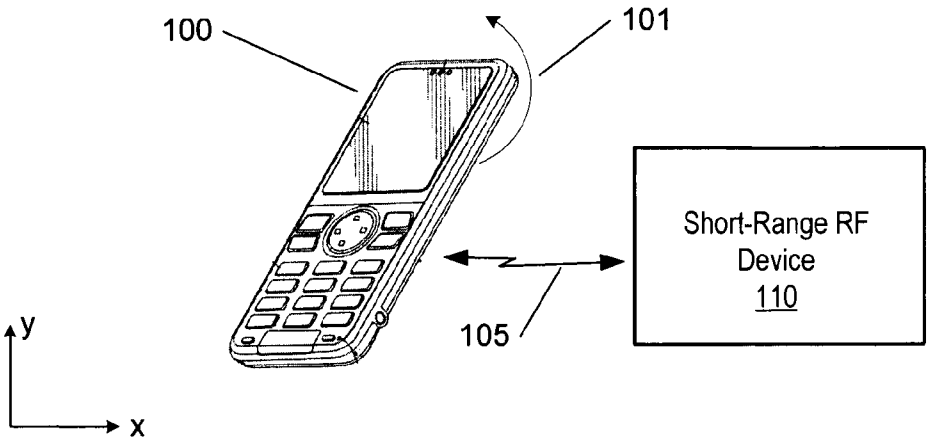


FIGURE 10A

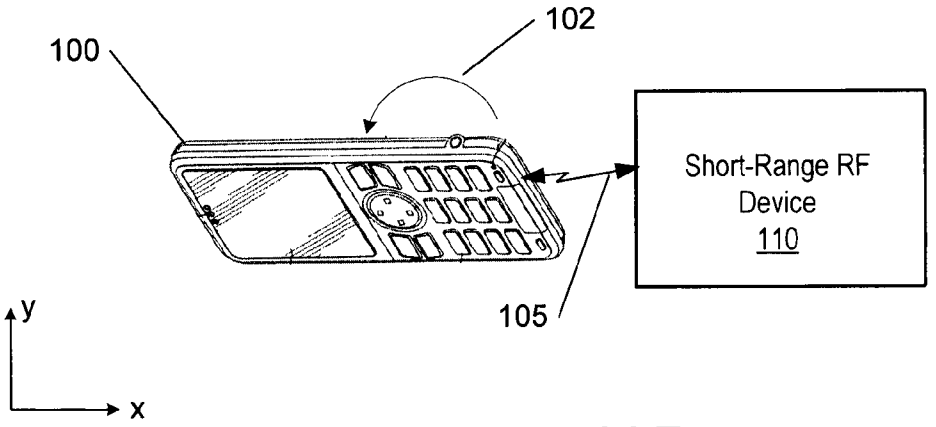


FIGURE 10B

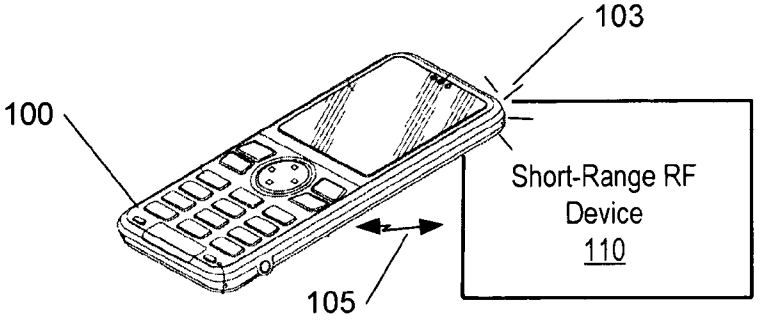


FIGURE 10C

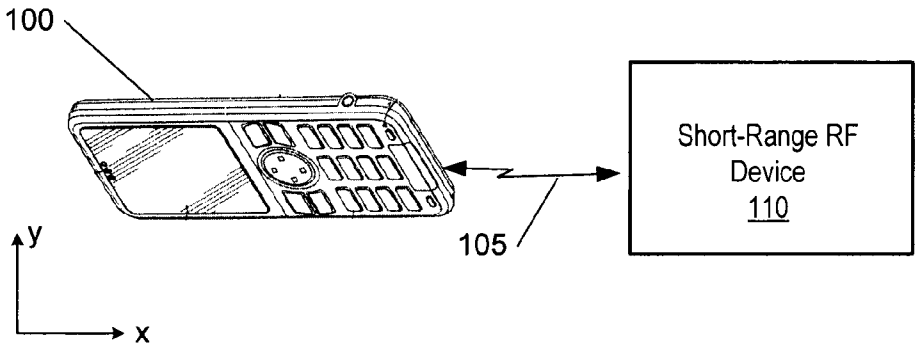


FIGURE 10D

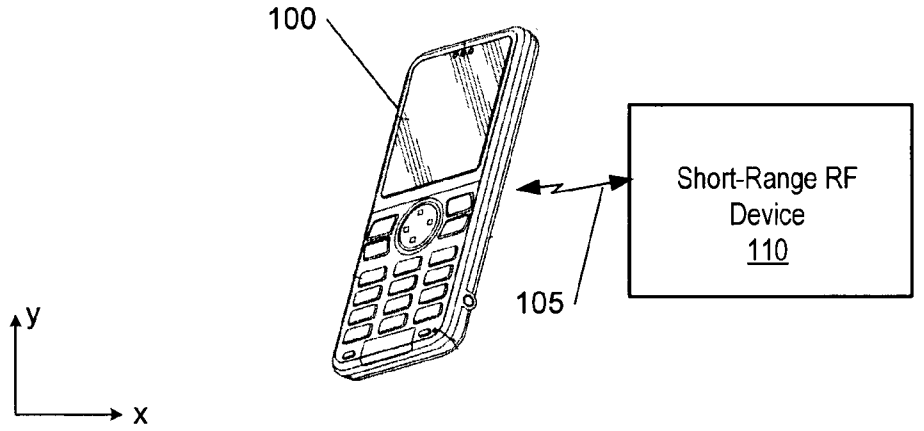


FIGURE 10E

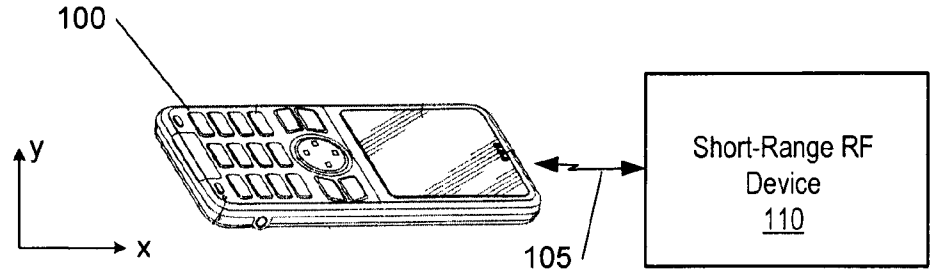


FIGURE 10F

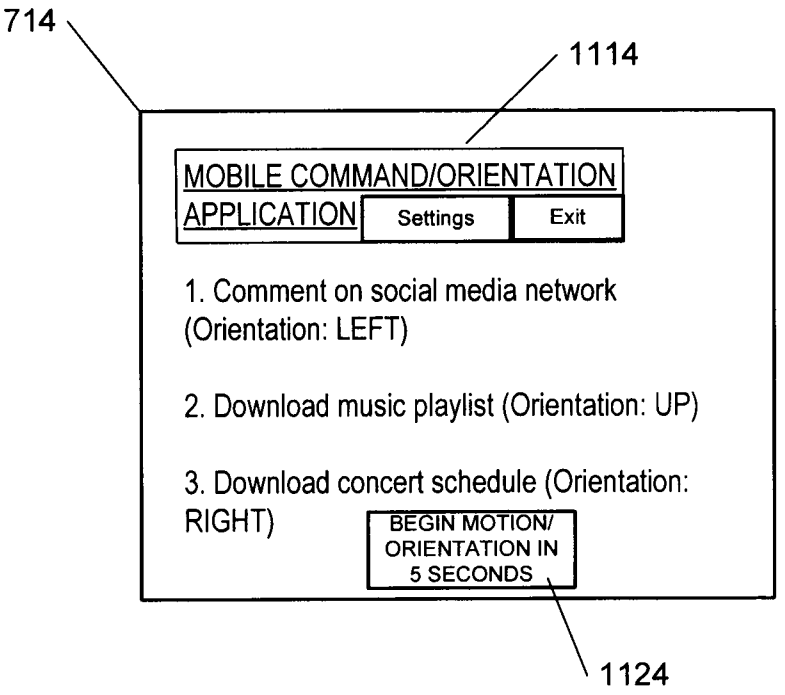

714
1114
MOBILE COMMAND/ORIENTATION APPLICATION
Settings
Exit
1. Comment on social media network (Orientation: LEFT)
2. Download music playlist (Orientation: UP)
3. Download concert schedule (Orientation: RIGHT)
BEGIN MOTION/ ORIENTATION IN 5 SECONDS
1124

FIGURE 11

METHODS OF RESPONDING TO AN ORIENTATION OR MOTION OF A PORTABLE ELECTRONIC DEVICE, AND RELATED DEVICES

FIELD

[0001] The present inventive concept generally relates to the field of communications and, more particularly, to methods of responding to an orientation or motion of a portable electronic device.

BACKGROUND

[0002] Short-range Radio Frequency (RF) wireless communications may include Near Field Communications (NFC). NFC is a wireless communication technology that enables short-range communications between closely-positioned (e.g., less than twenty (20.0) centimeters (cm)) wireless devices. NFC may operate at a frequency of 13.56 Megahertz (MHz), which, in some countries, falls in an unlicensed ISM (industrial, scientific, medical) frequency range. The 13.56 MHz operating frequency may also be used for Radio Frequency Identification (RFID) applications. Thus, an NFC device can communicate with other NFC devices in a peer-to-peer communication mode, as well as with RFID devices in a read/write mode. Like RFID, NFC uses magnetic field induction for communication. In magnetic field induction, two communicating devices each include loop antennas. When placed in close proximity (e.g., less than twenty (20.0) cm), an electrical signal on one of the loop antennas can induce an electrical signal in the other of the loop antennas, thus providing a communication path between the devices.

[0003] An NFC device (e.g., an NFC "tag") may be used to provide information (e.g., retail payment information) to a mobile phone. For example, a user of the mobile phone may initiate or finalize a communication session with the NFC tag by bringing the mobile phone into close proximity with the NFC tag. One example of such a communication may be communicating with an NFC tag near a painting to receive more information at the mobile phone about the artist of the painting.

SUMMARY

[0004] Various embodiments of the present inventive concept include a method of responding to an orientation or motion of a portable electronic device. The method may include receiving a plurality of commands at the portable electronic device from a proximately-located short-range radio frequency (RF) device through a direct point-to-point short-range RF communication link. The method may also include identifying the orientation or motion of the portable electronic device while the portable electronic device is proximately located to the short-range RF device. The method may further include selecting one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device.

[0005] In various further embodiments, the short-range RF communication link may include a magnetically-coupled near field communication (NFC) link. In other words, the plurality of commands may be received at the portable electronic device through the NFC link.

[0006] Various further embodiments provide that the short-range RF device may include an NFC tag. Additionally, the method may further include powering the NFC tag through magnetic coupling to a power source of the portable electronic device to initiate transfer of the plurality of commands to the portable electronic device through the NFC link.

[0007] In various further embodiments, selecting one of the plurality of commands may include the following actions by the portable electronic device: interpreting the plurality of commands; and performing the one of the plurality of commands that is selected by the portable electronic device without further input from a user. In other words, identifying the orientation or motion and selecting the one of the plurality of commands may not require user input beyond simply orienting and/or moving the portable electronic device.

[0008] Various further embodiments provide that performing the one of the plurality of commands that is selected may include transmitting a request from the portable electronic device to a network to request information from a network node.

[0009] In various further embodiments, transmitting the request from the portable electronic device to a network may include requesting a uniform resource locator (URL) that is included in the one of the plurality of commands that is selected by the portable electronic device.

[0010] Various further embodiments provide that each of the plurality of commands may be associated with a different URL.

[0011] In various further embodiments, interpreting the plurality of commands may include comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device.

[0012] Various further embodiments provide that the method may further include: receiving from the short-range RF device at the portable electronic device an indication of a corresponding orientation or motion that will trigger performing a respective one of the plurality of commands; and displaying information communicating the indication on a display device of the portable electronic device.

[0013] In various further embodiments, comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device may include using an application that associates each of the plurality of commands with a corresponding orientation or motion that will trigger performing a respective one of the plurality of commands.

[0014] Various further embodiments provide that identifying the orientation or motion of the portable electronic device may include processing information received from a motion sensor, a rotation sensor, a tap sensor, a proximity sensor, and/or camera of the portable electronic device while the portable electronic device is proximately located to the short-range RF device, to match the orientation or motion of the portable electronic device to one of a plurality of known orientations or motions.

[0015] In various further embodiments, the method may further include, before identifying the orientation or motion of the portable electronic device, displaying on a display device of the portable electronic device a list that identifies each of the plurality of commands, along with a respective orientation or motion that corresponds to each of the plurality of commands.

[0016] Various further embodiments provide that identifying the orientation or motion of the portable electronic device may be triggered in response to receiving the plurality of commands at the portable electronic device.

[0017] In various further embodiments, the short-range RF device may transmit each of the plurality of commands to the portable electronic device grouped in a serial data stream. Additionally, selecting one of the plurality of commands may include selecting only one of the plurality of commands.

[0018] According to various embodiments, a portable electronic device may include a short-range radio frequency (RF) communication module configured to receive a plurality of commands from a proximately-located short-range RF device through a direct point-to-point short-range RF communication link. The portable electronic device may also include a sensor configured to identify occurrence of one of a plurality of orientations and/or motions of the portable electronic device while proximately located to the short-range RF device. The portable electronic device may be further configured to select one of the plurality of commands in response to identifying the occurrence of the one of a plurality of orientations and/or motions of the portable electronic device.

[0019] In various further embodiments, the short-range RF communication module may include a near field communication (NFC) module. Additionally, the short-range RF communication link may include a magnetically-coupled NFC link. Moreover, the short-range RF device include an NFC tag that is powered through magnetic coupling to a power source of the portable electronic device. Furthermore, the sensor may include at least one of a motion sensor, a rotation sensor, a tap sensor, a proximity sensor, and a camera.

[0020] Various further embodiments provide that selecting one of the plurality of commands may include: comparing the plurality of commands with the one of a plurality of orientations and/or motions of the portable electronic device that is identified by the sensor; and performing the one of the plurality of commands that is selected.

[0021] In various further embodiments, the portable electronic device may further include a transceiver. Additionally, performing the one of the plurality of commands that is selected may include transmitting a request via the transceiver to a network.

[0022] Various further embodiments provide that transmitting the request via the transceiver to a network may include requesting a uniform resource locator (URL). Additionally, the URL may be associated with the one of the plurality of commands that is selected by the portable electronic device. Furthermore, each of the plurality of commands may be associated with a different URL.

[0023] According to various embodiments, a method of responding to an orientation or motion of a portable electronic device may include receiving a plurality of commands grouped in a serial data stream at the portable electronic device from a proximately-located short-range radio frequency (RF) device through a direct point-to-point short-range RF communication link. The method may also include identifying the orientation or motion of the portable electronic device while the portable electronic device is proximately located to the short-range RF device. The method may further include comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device. The method may additionally include performing only one of the plurality of commands, by transmitting a request from the portable electronic device to a network to initiate a download and/or access a website, in response to comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device.

[0024] Other methods and/or devices according to embodiments of the inventive concept will be or become apparent to one with skill in the art upon review of the following drawings and detailed description. It is intended that all such additional devices and/or systems be included within this description, be within the scope of the present inventive concept, and be protected by the accompanying claims. Moreover, it is intended that all embodiments disclosed herein can be implemented separately or combined in any way and/or combination.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] FIG. **1** illustrates a portable electronic device and a short-range Radio Frequency (RF) device that communicate with each other through a short-range RF communication link, according to various embodiments of the present inventive concept.

[0026] FIG. **2** is a schematic illustration of a wireless communications network that provides service to the portable electronic device, according to various embodiments of the present inventive concept.

[0027] FIG. **3** is a flowchart illustrating operations of responding to an orientation or motion of the portable electronic device, according to various embodiments of the present inventive concept.

[0028] FIGS. **4**A-**4**C are flowcharts illustrating operations that include identifying an orientation or motion of the portable electronic device, according to various embodiments of the present inventive concept.

[0029] FIG. **5** is a flowchart illustrating operations of transferring a plurality of commands from a Near Field Communication (NFC) tag to the portable electronic device, according to various embodiments of the present inventive concept.

[0030] FIG. **6** is a flowchart illustrating operations that include comparing a plurality of commands with an orientation or motion that is identified by the portable electronic device, according to various embodiments of the present inventive concept.

[0031] FIG. **7** is a block diagram illustrating the portable electronic device, according to various embodiments of the present inventive concept.

[0032] FIG. **8** is a block diagram illustrating an NFC module, according to various embodiments of the present inventive concept.

[0033] FIGS. **9**A and **9**B are block diagrams illustrating the short-range RF device, according to various embodiments of the present inventive concept.

[0034] FIGS. **10**A-**10**F illustrate orientations and motions of the portable electronic device, according to various embodiments of the present inventive concept.

[0035] FIG. **11** illustrates a list of commands and corresponding orientations on a display of the portable electronic device, according to various embodiments of the present inventive concept.

DETAILED DESCRIPTION OF EMBODIMENTS

[0036] The present inventive concept now will be described more fully with reference to the accompanying drawings, in which embodiments of the inventive concept are shown. However, the present application should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and to fully convey the scope of the

embodiments to those skilled in the art. Like reference numbers refer to like elements throughout.

[0037] The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the embodiments. As used herein, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "comprises," "comprising," "includes," and/or "including," when used herein, specify the presence of stated features, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, steps, operations, elements, components, and/or groups thereof.

[0038] It will be understood that when an element is referred to as being "coupled," "connected," or "responsive" to another element, it can be directly coupled, connected, or responsive to the other element, or intervening elements may also be present. In contrast, when an element is referred to as being "directly coupled," "directly connected," or "directly responsive" to another element, there are no intervening elements present. As used herein the term "and/or" includes any and all combinations of one or more of the associated listed items.

[0039] Spatially relative terms, such as "above", "below", "upper", "lower" and the like, may be used herein for ease of description to describe one element or feature's relationship to another element(s) or feature(s) as illustrated in the figures. It will be understood that the spatially relative terms are intended to encompass different orientations of the device in use or operation in addition to the orientation depicted in the figures. For example, if the device in the figures is turned over, elements described as "below" other elements or features would then be oriented "above" the other elements or features. Thus, the exemplary term "below" can encompass both an orientation of above and below. The device may be otherwise oriented (rotated 90 degrees or at other orientations) and the spatially relative descriptors used herein interpreted accordingly. Well-known functions or constructions may not be described in detail for brevity and/or clarity.

[0040] It will be understood that, although the terms first, second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are only used to distinguish one element from another. Thus, a first element could be termed a second element without departing from the teachings of the present embodiments.

[0041] Unless otherwise defined, all terms (including technical and scientific terms) used herein have the same meaning as commonly understood by one of ordinary skill in the art to which these embodiments belong. It will be further understood that terms, such as those defined in commonly used dictionaries, should be interpreted as having a meaning that is consistent with their meaning in the context of the relevant art and will not be interpreted in an idealized or overly formal sense unless expressly so defined herein.

[0042] It is to be understood that the functions/acts indicated in the illustrated blocks may occur out of the order noted in the operational illustrations. For example, two blocks shown in succession may in fact be executed substantially concurrently or the blocks may sometimes be executed in the reverse order, depending upon the functionality/acts involved.

[0043] Although Near Field Communication (NFC) links have been used to provide a given function (e.g., to facilitate payments for merchandise or to provide other information) for users of devices communicating through the NFC links, communication sessions using the NFC links have been somewhat basic (e.g., limited to the particular function). However, various embodiments of the methods and related devices described herein may provide options to a user of a portable electronic device in a relatively easily-accessible manner. For example, various embodiments described herein may use short-range Radio Frequency (RF) wireless communications (e.g., NFC communications) to provide multiple options to the user of the portable electronic device. In particular, in one example, an NFC tag may transfer a plurality of commands (e.g., different options/instructions/actions that can be performed by the portable electronic device) together (e.g., grouped in a serial data stream) to the portable electronic device through an NFC communication link.

[0044] Moreover, various embodiments described herein may provide receipt of all of the commands, and execution of a particular one of the commands, at the portable electronic device without requiring additional user inputs through manipulation of a user interface (e.g., keypad/keyboard/touch interface) beyond the particular orientation or motion (e.g., gesture) of the portable electronic device. For example, the plurality of commands may be transferred from the NFC tag to the portable electronic device in response to establishing an NFC communication link without requiring the user to look at a display of the portable electronic device and provide further input to the portable electronic device through a user interface. Additionally, the portable electronic device may select a particular one of the plurality of commands in response to identifying the particular orientation or motion of the portable electronic device without requiring the user to look at a display of the portable electronic device and provide further input to the portable electronic device through a user interface.

[0045] Referring to FIG. **1**, an illustration is provided of a portable electronic device **100** and a short-range RF device **110** that may communicate with each other through a short-range RF wireless communication link **105**, according to various embodiments of the present inventive concept. The short-range RF wireless communication link **105** may be a direct point-to-point link (e.g., in contrast with a cellular or Wireless Local Area Network (WLAN) link) between the portable electronic device **100** and the short-range RF device **110**. The short-range RF device **110** may transfer a plurality of commands to the portable electronic device **100** through the short-range RF wireless communication link **105**. For example, the short-range RF device **110** may be configured to transmit a plurality of different commands (e.g., commands to access/download audio, video, websites, and/or information content/files) to the portable electronic device **100**. As an example, the short-range RF device **110** may be configured to transfer a first command **104** and a second command **106** to the portable electronic device **100**. Although the first and second commands **104** and **106** are illustrated in FIG. **1** as an example, it will be understood that more than two commands (e.g., three, four, or more commands) may be transmitted together from the short-range RF device **110** to the portable electronic device **100**.

[0046] Referring now to FIG. **2**, a schematic illustration is provided of a wireless communications network **220** that provides service to the portable electronic device **100**, according to various embodiments of the present inventive concept. The wireless communications network **220** may include a base station transceiver **230** (e.g., a cellular base

station), a local wireless network transceiver **270** (e.g., WLAN or Bluetooth), a Mobile Telephone Switching Center (MTSC) **215**, and/or a Public Service Telephone Network (PSTN) **204** (i.e., a "landline" network). As also shown in FIG. **2**, the MTSC **215** is coupled to a computer server **235** via a network **231**, such as the Internet. The local wireless network transceiver **270** may also be connected to the network **231**. Accordingly, the portable electronic device **100** may receive a plurality of commands from the short-range RF device **110**, and may then access the computer server **235** (e.g., to access a website and/or to upload/download information/audio/video) via the local wireless network transceiver **270** or the base station transceiver **230** in response to a selected one of the plurality of commands.

[0047] Referring now to FIG. **3**, a flowchart is provided illustrating operations of responding to an orientation or motion of the portable electronic device **100**, according to various embodiments of the present inventive concept. The motion or orientation of the portable electronic device **100** occurs while the portable electronic device **100** is proximately located to short-range RF device **110**. For example, the motion or orientation may be a shake or a rotation (e.g., a spin or a flip) of the portable electronic device **100**. In another example, the motion or orientation may be a tap (or multiple taps) on the portable electronic device **100** (e.g., taps with a stylus or a user's finger), or a tap (or multiple taps) by the portable electronic device **100** on the short-range RF device **110**. In a further example, the motion or orientation may be an orientation of the portable electronic device **100** with respect to the ground or with respect to the short-range RF device **110**. For example, the orientation may be that a portion (e.g., a display) of the portable electronic device **100** faces (or doesn't face, or is oriented at a given angle with respect to) the short-range RF device **110**. In an additional example, the motion or orientation may be that the portable electronic device **100** is held (e.g., held substantially motionless) near or on the short-range RF device **110** for a given amount of time. Moreover, the motion or orientation of the portable electronic device **100** may be a combination of motion and orientation (e.g., rotation combined with a rightward orientation before/after/during the rotation), or may only be one of a motion or an orientation.

[0048] Referring still to FIG. **3**, the operations of responding to an orientation or motion of the portable electronic device **100** may include receiving a plurality of commands (e.g., the first command **104** and the second command **106**) at the portable electronic device **100** from the short-range RF device **110** (Block **305**). The portable electronic device **100** and the short-range RF device **110** may be proximately located to each other. For example, the short-range RF device **110** and the portable electronic device **100** may be within about four (4.0) centimeters (cm) of each other. In another example, the short-range RF device **110** and the portable electronic device **100** may be within about twenty (20.0) cm of each other.

[0049] As illustrated in Block **310** of FIG. **3**, according to various embodiments, the operations of responding to an orientation or motion of the portable electronic device **100** may further include selecting one of the plurality of commands, at the portable electronic device **100**, in response to identifying the orientation or motion of the portable electronic device **100**. For example, the portable electronic device **100** may identify the orientation or motion as being a shake, spin, flip, tilt, tap, hold/lack-of-motion, given angle-of-facing, given direction-of-facing, etc.

[0050] Referring now to FIGS. **4**A-**4**C, flowcharts are provided illustrating operations that include identifying an orientation or motion of the portable electronic device **100**, according to various embodiments of the present inventive concept. Referring to FIG. **4**A, the operations include establishing a direct point-to-point link **105** between the portable electronic device **100** and the short-range RF device **110** (Block **400**). In response, a plurality of commands are received at the portable electronic device **100** through the direct point-to-point link **105** (Block **401**). Additionally, the portable electronic device **100** identifies an orientation or motion of the portable electronic device **100** while the portable electronic device **100** is proximately located to the short-range RF device **110** (Block **402**). In various embodiments, the portable electronic device **100** may make this identification in response to receiving the plurality of commands. Alternatively, the portable electronic device **100** may make this identification in response to establishing the direct point-to-point link **105** (e.g., independently of receiving the plurality of commands). After receiving the plurality of commands and identifying the orientation or motion of the portable electronic device **100**, the portable electronic device **100** selects one of the plurality of commands in response to identifying the orientation or motion of the portable electronic device **100** (Block **403**).

[0051] Referring to FIG. **4**B, the operations include Blocks **400**-**403** of FIG. **4**A and further include Block **401'**. In particular, after receiving the plurality of commands (Block **401**), the portable electronic device **100** displays a list that identifies orientations/motions of the portable electronic device **100** and corresponding ones of the plurality of commands (Block **401'**). For example, the portable electronic device **100** may display a list that identifies first, second, and third commands and corresponding first, second, and third orientations/motions of the portable electronic device **100** that trigger execution of the respective commands. In various embodiments, the portable electronic device **100** may display the list before identifying the orientation or motion of the portable electronic device **100** (Block **402**). Alternatively, the portable electronic device **100** may display the list after identifying the orientation or motion of the portable electronic device **100** (Block **402**).

[0052] Referring to FIG. **4**C, the operations include Blocks **400**, **401**, and **403** of FIG. **4**A, and include Block **402'** instead of Block **402**. In particular, after receiving the plurality of commands (Block **401**), the portable electronic device **100** identifies an orientation or motion of the portable electronic device **100** while the portable electronic device **100** is proximately located to the short-range RF device **110**, in response to receiving the plurality of commands (Block **402'**). In other words, the identification of the orientation or motion of the portable electronic device **100** is triggered by receiving the plurality of commands. In various alternative embodiments, however, the portable electronic device **100** may make this identification independently of receiving the plurality of commands.

[0053] Referring now to FIG. **5**, a flowchart is provided illustrating operations of transferring a plurality of commands from a Near Field Communication (NFC) tag to the portable electronic device **100**, according to various embodiments of the present inventive concept. For example, referring again to FIG. **1**, the short-range RF device **110** may be an

NFC tag. Also, the short-range RF communication link **105** may be an NFC link. As such, according to various embodiments, the operations of responding to an orientation or motion of the portable electronic device **100** include establishing a magnetically-coupled NFC link **105** between the portable electronic device **100** and the NFC tag **110** (Block **500**). The operations may also include powering the NFC tag **110** through magnetic coupling to a power source of the portable electronic device **100** to initiate transfer of a plurality of commands from the NFC tag **110** to the portable electronic device **100** through the NFC link **105** (Block **501**). The operations may further include identifying an orientation or motion of the portable electronic device **100** while the portable electronic device **100** is proximately located to the NFC tag **110** (Block **502**). This identification of the orientation or motion may be triggered by receipt of the plurality of commands at the portable electronic device **100**, or may be independent of such receipt. Moreover, the operations may further include selecting one of the plurality of commands, at the portable electronic device **100**, in response to identifying the orientation or motion of the portable electronic device **100** (Block **503**).

[0054] Referring now to FIG. **6**, a flowchart is provided illustrating operations that include comparing a plurality of commands with an orientation or motion that is identified by the portable electronic device **100**, according to various embodiments of the present inventive concept. The operations include establishing a direct point-to-point link **105** between the portable electronic device **100** and the short-range RF device **110** (Block **600**). In response, a plurality of commands (which are grouped together in a serial data stream) are received at the portable electronic device **100** through the direct point-to-point link **105** (Block **601**). Additionally, the portable electronic device **100** identifies an orientation or motion of the portable electronic device **100** while the portable electronic device **100** is proximately located to the short-range RF device **110** (Block **602**).

[0055] After receiving the plurality of commands and identifying the orientation or motion of the portable electronic device **100**, the portable electronic device **100** compares the plurality of commands with the orientation or motion that is identified by the portable electronic device **100** (Block **603**). For example, in performing this comparison, the portable electronic device **100** may use additional information (e.g., information in an application used by the portable electronic device **100** and/or information from the short-range RF device **110**) that associates the plurality of commands with different corresponding motions or orientations.

[0056] In response to comparing the plurality of commands with the identified orientation or motion of the portable electronic device **100** (Block **603**), the portable electronic device **100** selects and executes (i.e., performs) only one of the plurality of commands by transmitting a request to a network (e.g., to request information from a network node, such as via a request through the Internet and/or a WLAN) to initiate/set-up an upload/download and/or to access a website (Block **604**). As an example, each of the plurality of commands may be associated with a different Uniform Resource Locator (URL), and performing the selected one of the plurality of commands includes requesting only the URL associated with that particular command. In various embodiments, each of the URLs may be transmitted by the short-range RF device **110** along (e.g., grouped in a serial data stream) with the associated commands. Alternatively, the URLs may be transmitted separately by the short-range RF device **110**, or the URLs may be stored/searched-for/linked-to by an application that is used by the portable electronic device **100**.

[0057] Referring now to FIG. **7**, a block diagram is provided illustrating the portable electronic device **100**, according to various embodiments of the present inventive concept. The portable electronic device **100** may be any of a variety of portable electronic devices. For example, the portable electronic device **100** may be a mobile terminal (e.g., a mobile telephone), a portable audio player, a portable video player, a camera, an electronic reading device, or a portable computer (e.g., a tablet computer, a netbook computer, or a laptop computer).

[0058] As illustrated in FIG. **7**, the portable electronic device **100** may include a keypad **712**, a display **714**, a transceiver **720**, a memory **718**, a sensor **711**, a power source **719**, a speaker **715**, and a camera **713** that communicate with a controller **716**. According to various embodiments, the camera **713** may be configured as a sensor for detecting an orientation or motion of the portable electronic device **100**. For example, the camera **713** may determine a direction (or an angle) that the portable electronic device **100** is facing/oriented (e.g., with respect to the short-range RF device **110** or another reference point). According to various embodiments, identifying the orientation or motion of the portable electronic device **100** includes processing information received from the sensor **711** and/or the camera **713** to match the orientation or motion of the portable electronic device **100** to one of a plurality of known (e.g., stored in the memory **718** and/or an application used by the portable electronic device **100**) orientations or motions (e.g., rotation, spinning, rightward orientation, etc.).

[0059] The controller **716** may include any low-power microprocessor and/or microcontroller used for portable electronic device applications. The controller **716** can include a signal processor. Additionally, or alternatively, a signal processor can be provided as a separate component of the portable electronic device **100**.

[0060] The transceiver **720** may include a transmitter circuit **722** and a receiver circuit **724**, which may cooperate to transmit and receive RF signals via an antenna **728**. Although FIG. **7** illustrates that a portion of the antenna **728** extends beyond the housing of the portable electronic device **100**, in various embodiments, the antenna **728** may not be visible to a user of the portable electronic device **100** and/or may not protrude from the housing of the portable electronic device **100**. According to various embodiments, the transceiver **720** of the portable electronic device **100** may be configured to operate in any of the following bands: Advanced Mobile Phone Service (AMPS), ANSI-136, Global System for Mobile Communications (GSM), Third Generation Partnership Project (3GPP) Long Term Evolution (LTE), General Packet Radio Service (GPRS), enhanced data rates for GSM evolution (EDGE), Digital Communications Services (DCS), Personal Digital Cellular (PDC), Personal Communications Services (PCS), Code Division Multiple Access (CDMA), wideband-CDMA, CDMA2000, and/or Universal Mobile Telecommunications System (UMTS) frequency bands. Other bands can also be used in embodiments according to the inventive concept. Also, various embodiments may be compatible with Long Term Evolution (LTE) and/or High Speed Packet Access (HSPA) standards. Additionally or alternatively, in embodiments, the portable electronic device **100**

may be configured to communicate using Global Positioning System (GPS) and/or Wireless Local Area Network (WLAN) frequency bands.

[0061] The memory **718** may be a general purpose memory that is used to store both program instructions for the controller **716**, as well as data, such as audio data, video data, configuration data, and/or other data that may be accessed and/or used by the controller **716**. The memory **718** may include a nonvolatile read/write memory, a read-only memory, and/or a volatile read/write memory. In particular, the memory **718** may include a read-only memory in which basic operating system instructions are stored, a non-volatile read/write memory in which re-usable data, such as configuration information, directory information, and other information may be stored, as well as a volatile read/write memory, in which short-term instructions and/or temporary data may be stored. In various embodiments, the memory **718** may include a removable nonvolatile memory card.

[0062] The portable electronic device **100** further includes a short-range RF communication module **730** that may be configured to operate in a peer-to-peer mode and/or in a read/write mode. Other modes of operation, such as card emulation mode, may be possible. The short-range RF communication module **730** is operatively coupled to the controller **716** and can operate under the control of the controller **716**.

[0063] Still referring to FIG. **7**, the sensor **711** may include one or more sensors that are configured to identify a motion or orientation of the portable electronic device **100**. For example, the sensor **711** may include at least one of a motion sensor, a rotation sensor, a tap sensor, and a proximity sensor. In various embodiments, the motion sensor may be configured to identify shaking of the portable electronic device **100**. The motion sensor may additionally, or alternatively, be configured to identify when the portable electronic device **100** is held substantially still. In various embodiments, the rotation sensor may be configured to detect rotation (e.g., spinning or tilting) in one or more directions.

[0064] In various embodiments, the tap sensor and/or the proximity sensor may be configured to identify contact between the portable electronic device **100** and the short-range RF device **110**. According to various embodiments, the tap sensor may include a microphone that is configured to detect tapping/knocking on the portable electronic device **100** (e.g., to detect the sound of tapping/knocking on the portable electronic device **100** with a user's finger or with the short-range RF device **110**). Moreover, in various embodiments, the tap sensor may include a touch sensor that detects a touch (e.g., by a user's finger) on a portion (e.g., a touch screen of the display **714**) of the portable electronic device **100**. Furthermore, in various embodiments, the tap sensor may include an accelerometer that is configured to detect tapping/knocking on the portable electronic device **100**.

[0065] Accordingly, referring still to FIG. **7**, the portable electronic device **100** may include a short-range RF communication module **730** that is configured to receive at least one of the first command **104** and the second command **106** (illustrated in FIG. **1**) from the proximately-located short-range RF device **110** (e.g., through the short-range RF communication link **105**). The portable electronic device **100** may further include a sensor (e.g., the sensor **711** and/or the camera **713**) that is configured to identify occurrence of one of a plurality of device gestures that are made by motion or orientation of the portable electronic device **100** while proximately located to the short-range RF device **110**.

[0066] According to various embodiments, the portable electronic device **100** and the short-range RF device **110** may be different types of devices. For example, the portable electronic device **100** may be a battery-powered device (e.g., the power source **719** may include a battery), and the short-range RF device **110** may not be battery-powered, but rather may receive power from an external source (e.g., from signals transmitted by the portable electronic device **100**). Accordingly, the power source **719** of the portable electronic device **100** may power the short-range RF device **110** through magnetic coupling. Additionally or alternatively, the portable electronic device **100** may include a display device (e.g., the display **714**) and/or a keypad (e.g., the keypad **712**), whereas the short-range RF device **110** may not have a display and/or a keypad. Moreover, in various embodiments, the short-range RF device **110** may be an NFC tag that is configured to provide the plurality of commands (e.g., the first command **104** and the second command **106** illustrated in FIG. **1**) to the portable electronic device **100**, but that may not be configured to execute the plurality of commands. For example, the short-range RF device **110** may not be configured to download/play music or videos, or to open a hyperlink, even though the short-range RF device **110** may command such actions by the plurality of commands that it transfers to the portable electronic device **100** (which is configured to execute the plurality of commands).

[0067] In various embodiments, the portable electronic device **100** may be commanded by the selected one of the plurality of commands to selectively activate a portion of the portable electronic device **100**, in response to detecting (e.g., via the sensor **711** and/or the camera **713**) a particular orientation or motion of the portable electronic device **100**. For example, the portable electronic device **100** may be commanded to open a web browser or a multimedia application (e.g., music player or video player) in response to detecting a particular orientation or motion. In other words, although the plurality of commands may operate in various embodiments by transmitting requests to a network, the plurality of commands may additionally or alternatively command actions that are specific to (and/or confined within) the portable electronic device **100** itself. Thus, according to various embodiments, the plurality of commands may command specific actions (e.g., starting a function or application on the portable electronic device **100**, or choosing a setting of the portable electronic device **100**) that are specific to (and/or confined within) the portable electronic device **100**.

[0068] Referring now to FIG. **8**, a block diagram is provided illustrating an NFC module **830**, according to various embodiments of the present inventive concept. For example, the short-range RF communication module **730** of the portable electronic device **100** illustrated in FIG. **7** may include the NFC module **830**. Also, the short-range RF communication link **105** illustrated in FIG. **1** may be an NFC link. As illustrated in FIG. **8**, the NFC module **830** may include an antenna **836**, a control circuit **834**, and a memory **832**. The antenna **836** may include a loop antenna that is tuned to transmit/receive electromagnetic signals at a frequency of about 13.56 MHz. The control circuit **834** controls operation of the NFC module **830**, and can include a microprocessor or other control circuitry. The memory **832** can store data and/or settings used by the control circuit **834** in performing NFC communications. The control circuit **834** can operate in response to instructions from the controller **716** of the portable electronic device **100** illustrated in FIG. **7**. In particular,

the controller **716** of the portable electronic device **100** can execute a communication Application Programming Interface (API) that controls operation of the NFC module **830** illustrated in FIG. **8**. The communication API permits application programs executing on the portable electronic device **100** to query and exchange data with other NFC-enabled devices according to one or more of the NFC operational modes, such as read/write mode and peer-to-peer mode.

[0069] Referring now to FIGS. **9**A and **9**B, block diagrams are provided illustrating the short-range RF device **110**, according to various embodiments of the present inventive concept. As illustrated in FIG. **9**A, the short-range RF device **110** may include a short-range RF communication module **904**. The short-range RF communication module **904** may be configured to communicate with the portable electronic device **100** through the short-range RF communication link **105**, as described with respect to the operations illustrated in FIGS. **3**-**6**. Additionally, the short-range RF device **110** may include a memory module **902**, which may store a plurality of commands (e.g., the first and second commands **104** and **106**).

[0070] As illustrated in FIG. **9**B, the short-range RF communication module **904** may include an NFC module **994** in various embodiments. Accordingly, the short-range RF device **110** may be an NFC tag **910**, and the short-range RF communication link **105** may be an NFC link. According to various embodiments, the NFC module **994** may be configured to operate in a passive mode. In other words, the NFC module **994** may not have a separate power source, and may therefore operate using power derived from signals transmitted by the portable electronic device **100**.

[0071] Referring now to FIGS. **10**A-**10**F, orientations and motions of the portable electronic device **100** are illustrated, according to various embodiments of the present inventive concept. As illustrated in FIG. **10**A, the portable electronic device **100** may perform a motion in the form of a rotation **101**. The rotation **101** may be clockwise or counterclockwise. In one example, the rotation **101** may be a spin around the y-axis that is illustrated in FIG. **10**A. In particular, the rotation **101** may include circling (e.g., spinning 360 degrees, or more, around) the y-axis one or more times, or partially circling (e.g., spinning fewer than 360 degrees around) the y-axis.

[0072] As illustrated in FIG. **10**B, the portable electronic device **100** may perform a motion in the form of a tilt **102**. The tilt **102** may including rotating around the x-axis. For example, the tilt **102** may include rotating 45 degrees around the x-axis. Also, the tilt **102** may be a flip of the portable electronic device **100**. For example, the portable electronic device **100** may be flipped from right-side-up to up-side-down (e.g., the tilt **102** may include about 180 degrees of rotation), or vice versa.

[0073] In various embodiments, the rotation **101** and/or the tilt **102** of the portable electronic device **100** may be determined while proximately located to the short-range RF device **110**. For example, the rotation **101** and/or the tilt **102** may be identified with respect to a portion (e.g., the display **714**) of the portable electronic device **100** that rotates and/or tilts (e.g., toward or away from the short-range RF device **110**). In one example, the portable electronic device **100** may perform a motion in the form of the tilt **102** such that the tilt **102** orients the display **714** of the portable electronic device **100** in a direction facing the short-range RF device **110**.

[0074] Moreover, the portable electronic device **100** may perform a motion in the form of a shake (e.g., a user may shake the portable electronic device **100**). For example, the sensor **711** may include one or more gyroscopes and/or accelerometers configured to detect a shake of the portable electronic device **100**. In particular, referring to FIGS. **7**, **10**A, and **10**B, the sensor **711** may be configured to detect the shake by detecting motion of the portable electronic device **100** (e.g., by detecting motion along the x-axis, the y-axis, and/or an axis substantially perpendicular to the x-axis or the y-axis). Although the example of a shake is provided herein, it will be understood that gyroscopes and/or accelerometers may also be used to detect various other motions/orientations.

[0075] As illustrated in FIG. **10**C, the portable electronic device **100** may perform a device motion/gesture in the form of contact **103** with the portable electronic device **100**. For example, the contact **103** may be performed if the portable electronic device **100** taps one or more times against the short-range RF device **110**. In another example, the contact **103** may be performed if a user of the portable electronic device **100** taps/knocks a portion (e.g., a housing or the display **714**) of the portable electronic device **100** with a finger or a stylus.

[0076] The device motions/gestures of rotation **101**, tilt **102**, and contact **103** illustrated in FIGS. **10**A-**10**C may be detected by one or more sensors (e.g., the sensor **711** and/or the camera **713**) of the portable electronic device **100**. Additionally or alternatively, in various embodiments, these and/or other device gestures may be detected by one or more external sensors (e.g., cameras near the short-range RF device **110**).

[0077] As illustrated in FIG. **10**D, the portable electronic device **100** may have an orientation to the left along the x-axis. For example, the top of the portable electronic device **100** may be pointing to the left along the x-axis. In various embodiments, this leftward orientation of the portable electronic device **100** may be identified by the portable electronic device **100** (e.g., by the sensor **711** and/or the camera **713**) while proximately located to the short-range RF device **110**.

[0078] Also, as illustrated in FIG. **10**E, the portable electronic device **100** may have an upward orientation. For example, the top of the portable electronic device **100** may be pointing up (e.g., away from the ground) along the y-axis.

[0079] Additionally, as illustrated in FIG. **10**F, the portable electronic device **100** may have an orientation to the right along the x-axis. For example, the top of the portable electronic device **100** may be pointing to the right along the x-axis.

[0080] In various embodiments, the motions/orientations illustrated in FIGS. **10**A-**10**F of the portable electronic device **100** may be identified by the portable electronic device **100** while proximately located to the short-range RF device **110**. In response to identifying a particular one of the motions/orientations of the portable electronic device **100**, the portable electronic device **100** may select and perform one of the plurality of commands. For example, in response to identifying a rightward orientation of the portable electronic device **100**, as illustrated in FIG. **10**F, the portable electronic device **100** may select and perform the particular command that corresponds with the rightward orientation. Additionally, although leftward, upward, and rightward orientations of the portable electronic device **100** are described, it will be understood that other orientations (e.g., diagonal, downward, etc.) of the portable electronic device **100** may additionally or alternatively be used to trigger the selection and execution of

particular ones of the plurality of commands transmitted by the short-range RF device **110**.

[0081] Referring now to FIG. **11**, a list of commands and corresponding orientations of the portable electronic device **100** are illustrated on a display device **714** of the portable electronic device **100**, according to various embodiments of the present inventive concept. For example, a user of the portable electronic device **100** may approach the short-range RF device **110** at a music concert, and the displayed list may include commands pertinent to a fan at that concert. The list may include each of the plurality of commands that is transmitted from the short-range RF device **110** to the portable electronic device **100**. As an example, the list may include: (1) a command to interact with a social media network (e.g., to post a comment/indication-of-approval and/or audio/video/images to a social media website); (2) a command to access/download audio/video/images (e.g., to download music or lyrics or a playlist); and (3) a command to download a concert schedule. The list of commands may be presented on the display device **714** when the portable electronic device **100** is connected to the short-range RF device **110** via the direct point-to-point short-range RF communication link **105**. Additionally, a corresponding motion or orientation may be displayed with each of the displayed commands. In other words, the display device **714** may indicate that a leftward orientation of the portable electronic device **100** will trigger selection and performance of command (1), whereas an upward orientation will trigger selection and performance of command (2) and a rightward orientation will trigger selection and performance of command (3).

[0082] As another example, a user of the portable electronic device **100** may approach the short-range RF device **110** in a store (e.g., a retail store). A leftward orientation of the portable electronic device **100** while proximately located to the short-range RF device **110** may trigger selection and performance of a command to update the user's location on a social media website (i.e., to indicate via the social media website that the user is in the store). In contrast, an upward (i.e., vertical) orientation of the portable electronic device **100** may trigger selection and performance of a command to download and display (on the display device **714**) current special offers or rebates. Alternatively, a rightward orientation of the portable electronic device **100** may trigger selection and performance of a command to download and display a current status of the user's account (e.g., a credit account or a rewards/loyalty account) with the store. Furthermore, a spinning motion of the portable electronic device **100** may trigger selection and performance of a command to download and display technical specifications of a product in the store.

[0083] Additionally, according to various embodiments, an indication may be provided on the display device **714** of the portable electronic device **100** regarding when the portable electronic device **100** will identify the motion or orientation thereof. For example, along with displaying a list of commands and corresponding motions/orientations, an alert **1124** may be provided on the display device **714** in the form of a countdown to tell a user to begin a motion/orientation of the portable electronic device **100** after a given amount of time (e.g., after 5 . . . 4 . . . 3 . . . 2 . . . 1 seconds). Alternatively, the alert **1124** may provide an indication that the user may "BEGIN MOTION/ORIENTATION NOW," without going through a countdown.

[0084] According to various embodiments, the portable electronic device **100** may receive from the short-range RF device **110** indications of the corresponding motions/orientations that will trigger selection and performance of each of the respective commands. The portable electronic device **100** may then display information communicating the indications on the display device **714** of the portable electronic device. For example, the short-range RF device **110** may transmit (either together with each command, or as a separate transmission) an indication of the corresponding motion or orientation that will trigger the associated command, and the display device **714** may display this information in the form of a list. This list may be displayed before and/or after identifying the orientation or motion of the portable electronic device **100**. In other words, although various embodiments provide for displaying the list before identifying a motion/orientation and selecting a command, various other embodiments provide for completing the operations of identifying a motion/orientation and selecting a command before (or even without) displaying the list. Accordingly, a user of the portable electronic device **100** may not need to look at the display device **714** before completing the operations of identifying a motion/orientation and selecting a command.

[0085] Additionally or alternatively, the portable electronic device **100** may use an application **1114** that associates each of the plurality of commands with a corresponding orientation or motion that will trigger selection and performance of a respective one of the plurality of commands. The application **1114** may be displayed on the display device **714** of the portable electronic device **100**. According to various embodiments, the portable electronic device **100** may compare the plurality of commands with an identified motion or orientation of the portable electronic device **100** using the application **1114**. The application **1114** may thus be used to select one command from the plurality of commands. In various embodiments, the application **1114** may store/search-for/link-to/access URLs that correspond to the plurality of commands. For example, the application **1114** may perform a particular command by requesting a URL (e.g., to access a social media website or a music website) corresponding to that command. The different URLs corresponding to the different ones of the plurality of commands may be for different merchants' websites or for different pages/functions of the same merchant's website (e.g., different actions on the same social media network).

[0086] As described herein, motions/orientations of the portable electronic device **100** may trigger selection and performance of various commands. Additionally, in various embodiments, the portable electronic device **100** may use an application **1114** that is personalizable/customizable. For example, a user may have a short-range RF device **110** (e.g., an NFC tag **910**) in the user's car. By using/programming the settings of the application **1114** to personalize/customize the application **1114**, the user may determine that a particular motion or orientation executes a particular one of the plurality of commands that are transmitted as a group from the NFC tag **910** to the portable electronic device **100**. For example, the NFC tag **910** in the user's car may transmit commands to the portable electronic device **100** for a navigational system and/or may transmit commands for accessing music on/with the portable electronic device **100**. As an example, a user may personalize/customize the application **1114** to determine that a rightward orientation of the portable electronic device **100** will trigger selection and performance of a command to access a website for a nearby merchant (e.g., a restaurant, retailer, or hotel) when using the navigational system,

whereas a spinning motion of the portable electronic device **100** will trigger selection and performance of a command to download/access music (e.g., from a streaming music service or from a music store that sells downloads).

[0087] Many different embodiments have been disclosed herein, in connection with the above description and the drawings. It will be understood that it would be unduly repetitious and obfuscating to literally describe and illustrate every combination and subcombination of these embodiments. Accordingly, the present specification, including the drawings, shall be construed to constitute a complete written description of all combinations and subcombinations of the embodiments described herein, and of the manner and process of making and using them, and shall support claims to any such combination or subcombination.

[0088] In the drawings and specification, there have been disclosed various embodiments and, although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation.

1. A method of responding to an orientation or motion of a portable electronic device, comprising:

receiving a plurality of commands at the portable electronic device from a proximately-located short-range radio frequency (RF) device through a direct point-to-point short-range RF communication link;

identifying the orientation or motion of the portable electronic device while the portable electronic device is proximately located to the short-range RF device; and

selecting one of the plurality of commands, at the portable electronic device, in response to identifying the orientation or motion of the portable electronic device.

2. The method of claim **1**, wherein the plurality of commands are received at the portable electronic device through a magnetically-coupled near field communication (NFC) link.

3. The method of claim **2**, wherein the short-range RF device comprises an NFC tag, and wherein the method further comprises powering the NFC tag through magnetic coupling to a power source of the portable electronic device to initiate transfer of the plurality of commands to the portable electronic device through the NFC link.

4. The method of claim **1**, wherein selecting one of the plurality of commands comprises the following actions by the portable electronic device:

interpreting the plurality of commands; and

performing the one of the plurality of commands that is selected by the portable electronic device without further input from a user.

5. The method of claim **4**, wherein performing the one of the plurality of commands that is selected comprises transmitting a request from the portable electronic device to a network to request information from a network node.

6. The method of claim **5**, wherein transmitting the request from the portable electronic device to a network comprises requesting a uniform resource locator (URL) that is included in the one of the plurality of commands that is selected by the portable electronic device.

7. The method of claim **6**, wherein each of the plurality of commands is associated with a different URL.

8. The method of claim **4**, wherein interpreting the plurality of commands comprises comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device.

9. The method of claim **8**, further comprising:

receiving from the short-range RF device at the portable electronic device an indication of a corresponding orientation or motion that will trigger performing a respective one of the plurality of commands; and

displaying information communicating the indication on a display device of the portable electronic device.

10. The method of claim **8**, wherein comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device comprises using an application that associates each of the plurality of commands with a corresponding orientation or motion that will trigger performing a respective one of the plurality of commands.

11. The method of claim **1**, wherein identifying the orientation or motion of the portable electronic device comprises processing information received from a motion sensor, a rotation sensor, a tap sensor, a proximity sensor, and/or camera of the portable electronic device while the portable electronic device is proximately located to the short-range RF device, to match the orientation or motion of the portable electronic device to one of a plurality of known orientations or motions.

12. The method of claim **1**, further comprising, before identifying the orientation or motion of the portable electronic device, displaying on a display device of the portable electronic device a list that identifies each of the plurality of commands, along with a respective orientation or motion that corresponds to each of the plurality of commands.

13. The method of claim **1**, wherein identifying the orientation or motion of the portable electronic device is triggered in response to receiving the plurality of commands at the portable electronic device.

14. The method of claim **1**, wherein:

the short-range RF device transmits each of the plurality of commands to the portable electronic device grouped in a serial data stream; and

selecting one of the plurality of commands comprises selecting only one of the plurality of commands.

15. A portable electronic device, comprising:

a short-range radio frequency (RF) communication module configured to receive a plurality of commands from a proximately-located short-range RF device through a direct point-to-point short-range RF communication link; and

a sensor configured to identify occurrence of one of a plurality of orientations and/or motions of the portable electronic device while proximately located to the short-range RF device, the portable electronic device being further configured to select one of the plurality of commands in response to identifying the occurrence of the one of a plurality of orientations and/or motions of the portable electronic device.

16. The portable electronic device of claim **15**, wherein:

the short-range RF communication module comprises a near field communication (NFC) module;

the short-range RF communication link comprises a magnetically-coupled NFC link;

the short-range RF device comprises an NFC tag that is powered through magnetic coupling to a power source of the portable electronic device; and

the sensor comprises at least one of a motion sensor, a rotation sensor, a tap sensor, a proximity sensor, and a camera.

17. The portable electronic device of claim **15**, wherein selecting one of the plurality of commands comprises:

comparing the plurality of commands with the one of a plurality of orientations and/or motions of the portable electronic device that is identified by the sensor; and

performing the one of the plurality of commands that is selected.

18. The portable electronic device of claim **17**, further comprising a transceiver, wherein performing the one of the plurality of commands that is selected comprises transmitting a request via the transceiver to a network.

19. The portable electronic device of claim **18**, wherein:

transmitting the request via the transceiver to a network comprises requesting a uniform resource locator (URL);

the URL is associated with the one of the plurality of commands that is selected by the portable electronic device; and

each of the plurality of commands is associated with a different URL.

20. A method of responding to an orientation or motion of a portable electronic device, comprising:

receiving a plurality of commands grouped in a serial data stream at the portable electronic device from a proximately-located short-range radio frequency (RF) device through a direct point-to-point short-range RF communication link;

identifying the orientation or motion of the portable electronic device while the portable electronic device is proximately located to the short-range RF device;

comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device; and

performing only one of the plurality of commands, by transmitting a request from the portable electronic device to a network to initiate a download and/or access a website, in response to comparing the plurality of commands with the orientation or motion that is identified by the portable electronic device.

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